

REMARKS

The Office Action dated May 7, 2008, has been received and reviewed. The preceding amendments and following remarks form a full and complete response thereto. Claim 1 has been amended, but no new matter has been added. Claims 2, 5, and 6 have been cancelled without prejudice. Support for the amendment to claim 1 can be found, *inter alia*, in cancelled claims 2, 5, and 6 as well as paragraphs 38-41 of the specification. Accordingly, claims 1, 3-4, 7-17, and 39-40 are pending in this application and are submitted for consideration.

Claim Rejections – 35 U.S.C. § 102

The Office rejected claims 1-17 and 39-40 under 35 U.S.C. § 102(b) as anticipated by International Publication No. WO 00/67131 to Roberts et al. (“Roberts”). Applicants respectfully traverse the rejection on the basis that claims 1, 3-4, 7-17, and 39-40 recite subject matter not disclosed by Roberts.

Claim 1, as amended, recites a communication interface for providing an interface between a data link and a data processor, the data processor being capable of supporting an operating system and a user application. The interface is arranged to apply data received over the link and identified as being directed to a particular logical data port associated with that user application to a first queue. The first queue is located in the address space of a user application. Additionally, the communication interface is arranged to apply data received over the link and identified as being directed to the operating system to a second queue. The data received over the link is analyzed and identified as being directed to the operating system or the data port to

determine whether that data meets one or more predefined criteria, and if it does meet the criteria, an interrupt is transmitted to the operating system.

Roberts discloses a memory mapped network interface and a method of synchronizing between a sending application running on a first computer and a receiving application running on a second computer. *See* Roberts at 1. According to embodiments described in Roberts, data can be transferred from a first computer to a second computer according to a method comprising the step of creating a buffer in the main memory of the second computer for storing data being transferred as well as data identifying one or more pointer memory locations. *Id.* at 7. Roberts also describes a computer network with two computers comprising a buffer for storing data being transferred between computers as well as data identifying one or more memory locations. *Id.* at 8. Additionally, to address a synchronization problem in memory mapped network interfaces, Roberts discloses using “Tripwires,” which comprise either addresses, address ranges, or other data to be matched. *See* Roberts at 10. Despite the Office’s assertions to the contrary, however, Roberts fails to disclose each and every element of claim 1.

For instance, Roberts fails to disclose a first queue that is located in the address space of a user application as required by claim 1. The Office suggests that Roberts’ disclosure of mapping a portion of an application memory address space onto a memory aperture of an NIC using page-tables discloses this. *See* Office Action at 3. It does not. Instead, Roberts clearly fails to disclose supporting a data queue in the address space of the user application with which the queue is associated at all. Indeed, figures 10-15 clearly show that the buffer disclosed in Roberts (and identified by the examiner as equivalent to the first queue) is located in the address space of the

operating system and **not** the address space of the user application as claim 1 requires. Thus, for this reason alone, the Office should withdraw the improper rejection of claim 1.

Roberts also fails to disclose a communication interface that applies data to a first queue directed to a particular logical data port and applying data to a second queue directed to the operating system, as claim 1 requires. The Office suggests that Roberts discloses this feature of claim 1 on page 3, lines 12-23, which is directed to packets. *See* Office Action at 3. The communication interface disclosed in Roberts, however, could not perform the features of claim 1 because, the Roberts system lacks any division of received data into separate queues depending whether the data is directed to the operating system or to a logical data port of a user application. Indeed, Roberts fails to suggest separating received data into different queues for different endpoints. Instead, Roberts discloses that the operating system receives all data into a circular buffer. *See* Roberts at 25. Furthermore, in embodiments of Roberts NIC supporting the Virtual Interface Architecture (VIA) standard, Roberts discloses writing a received data unit directly into the memory block specified by the address translation unit of the NIC – not a queue arranged to receive data for a particular logical data port or the operating system, as required by claim 1. Thus, Roberts fails to disclose a communication interface that applies data to a first queue directed to a particular logical data port and applying data to a second queue directed to the operating system, as claim 1 requires. For this additional, the Office should withdraw the improper rejection of claim 1.

Roberts, therefore, does not anticipate claim 1 because it fails to disclose each and every element of claim 1. Applicants, therefore, respectfully request withdrawal of the rejection of claim 1 and its dependent claims 2-17 and 39-40.

CONCLUSION

In view of the above, all rejections have been sufficiently addressed. Applicant submits that the application is now in condition for allowance and requests that claims 1, 3-4, 7-17, and 39-40 be allowed and this application passed to issue.

In the event that this paper is not timely filed, the Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Deposit Account No. 02-2135.

Respectfully submitted,

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